

PARENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference MI22-2663	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2004/027898	International filing date (day/month/year) 26/08/2004	(Earliest) Priority Date (day/month/year) 04/09/2003
Applicant MICRON TECHNOLOGY, INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☐ the text is approved as submitted by the applicant.
☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 19
☐ as suggested by the applicant.
☐ as selected by this Authority, because the applicant failed to suggest a figure.
☒ as selected by this Authority, because this figure better characterizes the invention.
- b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2004/027898

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

A method for forming double-sided capacitors for a semiconductor device includes forming a dielectric structure (86) which supports capacitor bottom plates (110) during wafer processing. The structure is particularly useful for supporting the bottom plates during removal of a base dielectric layer (84) to expose the outside of the bottom plates to form a double-sided capacitor. The support structure further supports the bottom plates during formation of a cell dielectric layer (200), a capacitor top plate (202), and final supporting dielectric (204). An inventive structure is also described.

Form PCT/ISA/210 (continuation of first sheet (3)) (January 2003)

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/US2004/027898

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L21/8242 H01L27/108 H01L21/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/086479 A1 (REINBERG ALAN R) 4 July 2002 (2002-07-04) paragraphs '0020! - '0033!; figures 2-11	1-5, 13, 14
X	US 6 180 450 B1 (DENNISON CHARLES H ET AL) 30 January 2001 (2001-01-30) column 4, line 29 - column 7, line 53; figures 1-9	9-12, 17-22
X	US 5 340 763 A (DENNISON ET AL) 23 August 1994 (1994-08-23) column 1, line 51 - column 5, line 46; figures 1-10	17-22
X	DE 44 47 804 C2 (MICRON TECHNOLOGY, INC.) 24 January 2002 (2002-01-24) paragraphs '0006! - '0020!; claim 1; figures 1-4	17-22
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

S document member of the same patent family

Date of the actual completion of the international search

18 February 2005

Date of mailing of the international search report

28/02/2005

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Form PCT/ISA/210 (second sheet) January 2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/090779 A1 (JANG SE-MYEONG) 11 July 2002 (2002-07-11) paragraphs '0022! - '0038!; figures 4-13 -----	1-22
A	US 2002/163026 A1 (PARK HONG-BAE) 7 November 2002 (2002-11-07) abstract; figure 3 -----	1-22

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/027898

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002086479 A1	04-07-2002	US 6403442 B1	11-06-2002
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Form PCT/ISA/210 (patent family annex) January 2004.